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ABSTRACT

In fall 2000, the staff of Los Rios Community College District Office of Institutional Research collaborated with occupational education deans, academic area deans, and faculty to develop a series of program-specific followup surveys to be administered in spring 2001. These surveys were designed to determine how well courses met the employment and educational needs of former Los Rios students, both those who earned degrees or certificates and those who did not. Accounting, Automotive Technology, Computer Information Science, and Electronics were the four programs targeted in 2001. Responses were received from 687 of the 1,718 former students who were sent surveys. The report identifies courses that former students believed made them very prepared for employment, and courses that former students thought did not prepare them well for employment. Findings show that the majority of former students who were working in their field of study did earn degrees or certificates. However, in Automotive Technology, 47.1% of students who were working in the field had not earned a degree or certificate, perhaps an indicate of the high demand in this field. Surveys also provided some information about current and future educational plans of former students that is of interest to educational planners. (SLD)

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RESEARCH *brief*

February 2002

Program Level Feedback from Former Occupational Education Students: Report 1 of 2

Summary Findings of Respondents District-wide

Office of Institutional Research
Los Rios Community College District

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RESEARCH brief

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PROGRAM LEVEL FEEDBACK FROM FORMER OCCUPATIONAL EDUCATION STUDENTS: REPORT 1 OF 2

During Fall 2000 the staff of Los Rios Community College District Office of Institutional Research collaborated with occupational education deans, academic area deans and faculty to develop a series of program specific follow-up surveys to be administered during Spring 2001. The program specific surveys were designed to determine how well courses met the employment and educational needs of former Los Rios students, both those who earned degrees or certificates as well as those who did not. Accounting, Automotive Technology, Computer Information Science and Electronics were the four programs selected for the Spring 2001 survey administration. What follows are highlights of the survey results.

Former Students Respond

Program area deans and faculty helped to define the non-returning student population by focusing on course-taking patterns that were indicative of students "majoring" in the program rather than the casual or one-time student. Over 1,700 surveys were mailed during Spring 2001 to former students of these four programs. For both the non-returning student population and those former students who earned degrees and certificates, the sample was based on either one or two years, depending on the size of the program. The total number of surveys mailed as well as the total number returned by the four programs are illustrated in Table 1.

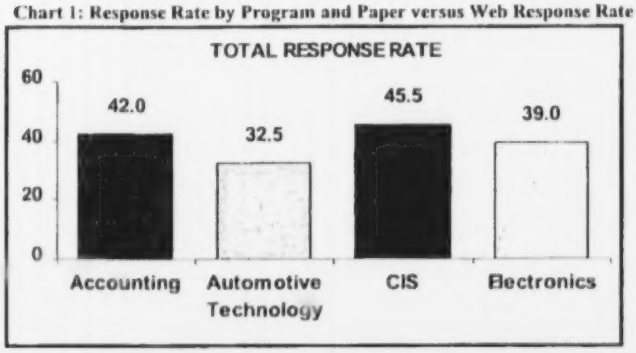
Table 1: Total Number of Surveys Mailed and Total Number of Surveys Returned by Program

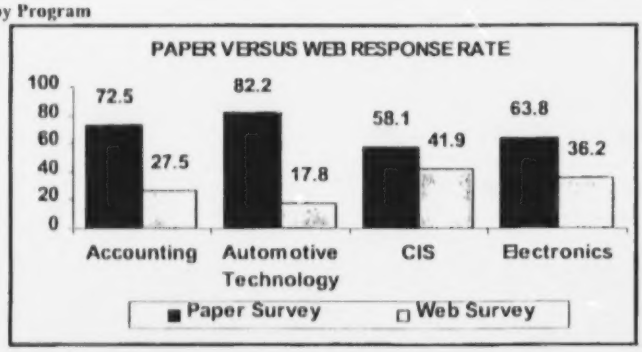
Program of Study	Total Surveys Mailed*	Total Surveys Completed
Accounting	433	182
Automotive Technology	449	146
Computer Information Science	503	229
Electronics	333	130
Total	1,718	687

* Adjusted for Undeliverable Mail

Survey recipients were given the opportunity to take the survey online through the Internet or answer the questions directly on the paper survey form and return it in an enclosed postage paid envelope. The following charts depict the overall response rates by program as well as web versus paper responses.

Chart 1: Response Rate by Program and Paper versus Web Response Rate by Program





A series of three reminders were sent to survey recipients, which contributed to the response rates in Chart 1, ranging from 32.5% for Automotive Technology to the 45.5% response rate for the CIS program. Not surprising, higher proportions of Automotive Technology students (82.2%) completed the paper version of the survey, while high proportions of former CIS students (41.9%) chose to answer the survey via the web. Over one quarter (27.5%) of former Accounting students took the survey over the web compared to the 72.5% who completed the paper version. Of further interest is the 36.2% of former Electronics students who completed the survey over the Internet.

Courses Where Former Students Believed They Were Very Prepared for Employment

Academic area deans and faculty helped design a series of program specific questions to determine how well former students were prepared for employment as a result of taking the courses. Table 2 illustrates the Top Five responses for each of the four programs surveyed. Accounting courses that respondents believed prepared them very well for employment ranged from the 41.2% of respondents very prepared as a result of Financial Accounting to the 20.6% very prepared from Cost Accounting courses. Over half, 58.3%, of Automotive Technology respondents believed courses in Brake Repair prepared them very well for employment.

Table 2: Courses Where Former Students Believed They Were Very Prepared

RANK	COURSE	% VERY PREPARED
	ACCOUNTING COURSES WHERE STUDENTS BELIEVED THEY WERE VERY PREPARED	
1.	Financial Accounting (ACCT 1A)	41.2%
2.	Managerial Accounting (ACCT 1B)	34.9%
3.	Fundamentals of College Accounting (ACCT 60)	28.2%
4.	Accounting on the Microcomputer (ACCT 5)	27.0%
5.	Cost Accounting (ACCT 92)	20.6%
	AUTOMOTIVE TECHNOLOGY COURSES WHERE STUDENTS BELIEVED THEY WERE VERY PREPARED	
1.	Brake Repair	58.3%
2.	Electrical Theory	46.7%
3.	Engine Repair	43.9%
4.	Use of A/C Service Tools	40.9%
5.	Refrigeration Theory	39.4%
	COMPUTER INFORMATION SCIENCE COURSES WHERE STUDENTS BELIEVED THEY WERE VERY PREPARED	
1.	General Computer Familiarization	54.3%
2.	Computer Software/Applications	39.0%
3.	Internet Skills	34.0%
4.	Foundation of Programming Languages	24.1%
5.	Logical Thought/Algorithm Development	23.1%
	ELECTRONICS COURSES WHERE STUDENTS BELIEVED THEY WERE VERY PREPARED	
1.	AC-DC Classes	53.2%
2.	Courses in Electronics Theory	49.2%
3.	Transistor	46.0%
4.	Digital Theory (computer or communications)	45.1%
5.	Lab or Practical/Hands-on Courses	44.0%

Over half, 54.3%, of CIS respondents believed that General Computer Familiarization courses prepared them very well for employment. Similarly, 53.2% of former Electronics students who responded to the survey believed that AC-DC classes prepared them very well for employment.

Courses Where Former Students Believed They Were Not Prepared for Employment

Overall, students feel adequately or very prepared by their courses but there were areas where 10.0% or more of the respondents believed they were not prepared as illustrated in Table 3.

Table 3: Courses Where Former Students Believed They Were Not Prepared*

RANK	COURSE	% NOT PREPARED
	AUTOMOTIVE TECHNOLOGY COURSES WHERE STUDENTS BELIEVED THEY WERE NOT PREPARED	
1.	Anti-lock Brakes	19.4%
2.	Use of Digital Storage Oscilloscope (DSO)	12.5%
3.	Automatic Transmission	11.6%
4.	Drive Train	10.8%
	COMPUTER INFORMATION SCIENCE COURSES WHERE STUDENTS BELIEVED THEY WERE NOT PREPARED	
1.	Systems Analysis	23.6%
2.	Computer Hardware	20.8%
3.	Network Technology	19.8%
4.	Foundation of Programming Languages	14.4%
5.	Logical Thought/Algorithm Development	13.2%
6.	Ability to Present Ideas Orally	12.7%

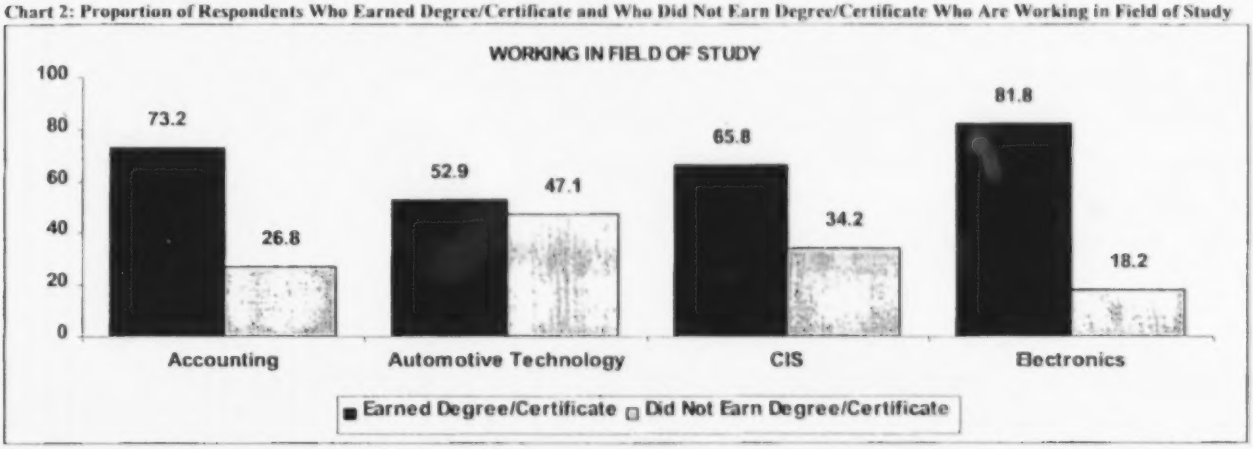
*** There were no Accounting or Electronics courses where more than 10.0% of respondents believed they were not prepared for employment.**

On the whole, former Automotive Technology students feel adequately or very prepared by their program coursework, but there were four courses where 10.0% or more believed they were not prepared. More respondents felt they were not prepared in Anti-lock brake courses; 19.4% responded they were not prepared as a result of taking the course. Generally, students also felt adequately prepared by their CIS courses. However, more respondents felt they were not prepared in Systems Analysis courses; 23.6% responded they were not prepared as a result of taking the course. A more comprehensive overview of student's opinions about their preparation in each program is available in the full district-wide summaries available on the Office of Institutional Research website (http://irweb.do.losrios.cc.ca.us).

Employment and Salary Information

Survey respondents were asked a series of questions regarding employment and salary status related to their program of study. Chart 2 illustrates the proportions of those respondents who are working in jobs related to their field of study by those who earned degrees and certificates and by those who did not earn degrees and certificates. The majority of former students who are working in their field of study have earned degrees and certificates.

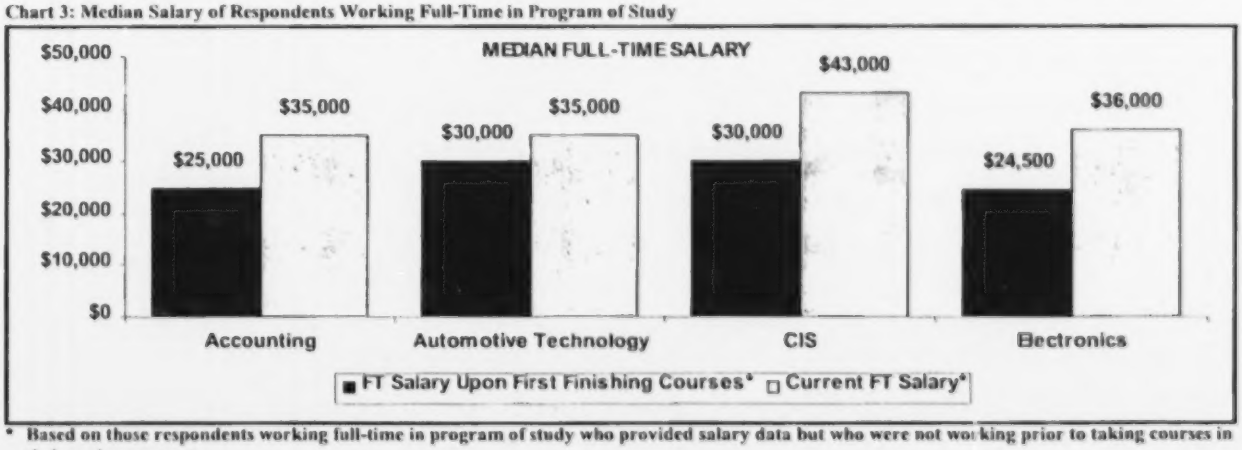
Chart 2: Proportion of Respondents Who Earned Degree/Certificate and Who Did Not Earn Degree/Certificate Who Are Working in Field of Study



Although a high proportion of CIS students (65.8%) working in their field of study earned a degree or certificate award, there is a fairly high proportion who did not earn an award (34.2%). This may reflect the recent high demand for employees in fields related to CIS. Even higher proportions of former Auto Tech respondents who are working in their field of study did not earn degree or certificate awards; 52.9% earned awards and 47.1% did not.

Median salary information provided by those respondents who are now working full-time in their field of study *but* who were not working prior to taking courses are illustrated in Chart 3 for each of the four programs surveyed. Median salaries for respondents' are given based upon when they first finished their courses as well as *current* median salary information.

Chart 3: Median Salary of Respondents Working Full-Time in Program of Study



* **Based on those respondents working full-time in program of study who provided salary data but who were not working prior to taking courses in their major program.**

The range of reported salaries follow: Accounting, $19,200 to $52,000; Automotive Technology, $15,360 to $60,000; CIS, $20,000 to $64,000; and Electronics $20,000 to $60,000. It is worth noting that the salary information is based on only those provided by former students who were working full-time and the salary ranges include salaries both on the low and the high end of the spectrum. However, the median salary information in Chart 3 might be the better indicator (average salaries are available in the full report), as it is a measure of that salary which is the midpoint of all reported. Unlike the mean or the ranges, it is not affected by a few extremely high or low values.

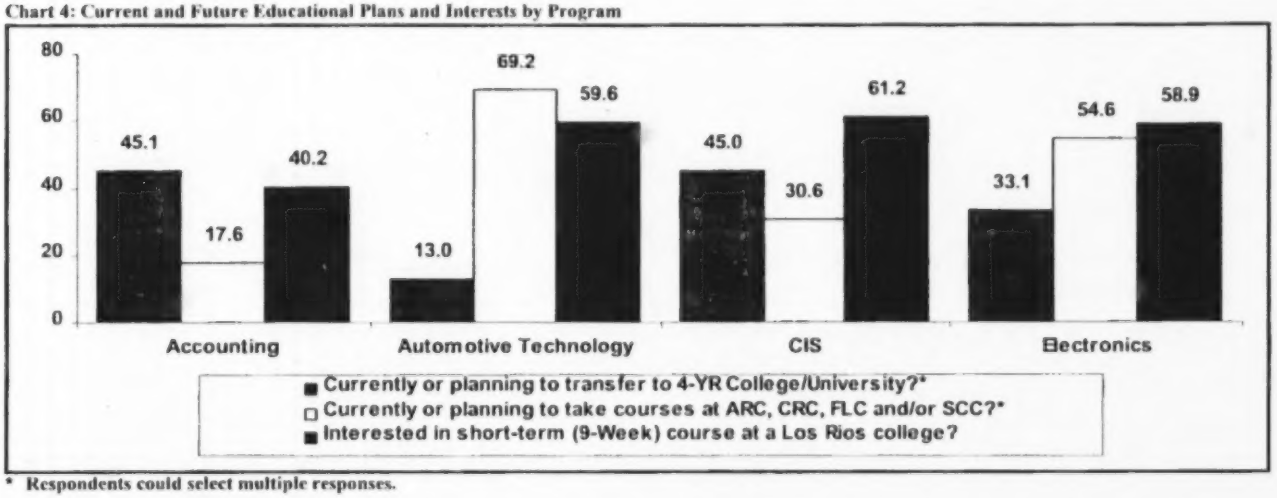
Current and Future Educational Plans and Interests

Current and future educational plans and interests of former Los Rios students who responded to the survey are varied and might provide valuable information for future planning purposes at the program level. Further detailed information at the program level can be found in the full summary report.

Chart 4 illustrates the current and future educational plans of survey respondents and the highlights of this chart follow:

- 40.2% of Accounting respondents indicted they were interested in a short-term (9-week) continuing education course related to Accounting.
- A high proportion, 69.2%, of Automotive Technology respondents are currently or are planning to take courses at one of the Los Rios colleges.

Chart 4: Current and Future Educational Plans and Interests by Program



* **Respondents could select multiple responses.**

- Well over half, 61.2%, of CIS respondents are interested in a short (about 9 hours) continuing education course related to new CIS-related technology.
- Over half, 54.6%, of former Electronics students are either currently taking or are planning to take courses at a Los Rios college while 58.9% are interested in short-term continuing education course related to new Electronics technology.

This RESEARCH *brief* was written by Betty Glyer-Culver, Research Analyst, LRCCD Office of Institutional Research (IR) and is based on research conducted by the "Former Student Follow-up Studies" team: research design, analysis and report writing -- Betty Glyer-Culver, Research Analyst; Web survey and SQL Server support and development -- Minh La, IT Analyst for Institutional Research; coordination of survey mailings and data input -- Chue Lo-Yang, Secretary. The *Former Student Follow-up* Study Team gratefully acknowledges input related to survey and report development by IR Director, Judy Beachler, program-specific question development by the occupational education and academic area deans and faculty at the colleges and the District Office of Workforce and Economic Development under the direction of Sandy Kirschenmann for Vocational and Technical Education Act (VTEA) funds which partially supported this project in compliance with funding requirements of the Carl D. Perkins Vocational and Technical Education Act of 1998. Additional copies of this report as well as the more comprehensive program level reports can be downloaded from our Web Site at: http://irweb.do.losrios.cc.ca.us or by calling 916-568-3131.

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